Model UVB1-CP

Component Video Active Balun Extension Kit

User's Manual

Boost & Send Standard or HDTV
Component Video (YPbPr)
on Cat5 Cable up to 1000 feet away

CUSTOMER SUPPORT INFORMATION

Order **toll-free** in the U.S. **800-959-6439**
FREE technical support, Call **714-641-6607** or fax **714-641-6698**
Mail order: **Hall Research**, 1163 Warner Ave., Tustin, CA 92780
Web site: **www.hallresearch.com** ☐ E-mail: **info@ hallresearch.com**

UMA1134 Rev B

1.0 Introduction

Thank you for purchasing the Hall Research Model UVB1-CP. This device can be used to extend SD or HDTV Component Video (YPbPr) over UTP (unshielded twisted pair) cables such as Cat5e or Cat6.

Unlike other passive Baluns this device is active and boosts the signal using wide bandwidth (450 MHz) differential (balanced) amplifiers for an unprecedented sharp and clean image.

The unit provides Ground-loop Isolation (GLI) and RFI (radio frequency interference) immunity to prevent 60 cycle video hum or distortion. Most competing Baluns provide no common mode rejection at low frequencies and are subject to facility grounding issues and noise pickup.

The active design matches the impedance of the UTP cable perfectly at all frequencies so that there is no image ghosting. Ghosting is a major issue with competing passive Baluns transmitting HD signals.

Only one power supply is needed for the setup and it can be plugged at either the sending or the receiving end, whichever convenient.

2.0 Package Contents

Your kit includes all the items that you should normally need for the setup (minus the Cat5 cable). The package includes a sender, receiver, a 9v DC power supply and two high quality Component Video cables and this user's manual. Please take a moment to inventory the contents at this time and if any item is missing, contact your vendor immediately.

3.0 Installation

1. Start by making sure that the power is off on your video source and the monitor.

2. Find the "Sender" Balun and connect it using one of the supplied 3-RCA cables to your video source (e.g. DVD player or Satellite receiver).

3. Connect the Sender's RJ45 port to the receiver using straight-through UTP or STP cable directly to the Receiver. You cannot connect the Cat5 cable to any other manufacture's device or network equipment.

4. Connect the "Receiver" to the display device (e.g. LCD TV or Projector). Make sure to match the colors of the YPbPr cables to your display's input port.

5. Connect the supplied power adapter to the power input connector on either of the units. Note that only one power adapter is used to power both the sender and receiver. It can be plugged into either of them.

6. Power up the source and destination equipment and check for an image.

4.0 Recommended Maximum Cable length

We recommend that you limit the length of the CAT5 cable as listed in the table below based on the video signal resolution.

Exceeding the recommended cable lengths may degrade the video signal depending on the resolution and the cable type used.

		Max Distance
Resolution	480i or 576i	1000 ft
	480p or 576p	750 ft
	720p, or 1080i	500 ft
	1080p	300 ft

Table 4.1

5.0 Troubleshooting

Most common problems are caused by the following:

- You have confused the Sender and the Receiver
- You have mismatched the RGB colors on the cable connections to the box and equipment
- You are using a Cat5 cable that is too long or is not straight through
- You have not connected the power supply, or it is not powered
- Your Monitor does not support the resolution that you are sending it (in which case you should check operation without the Balun first)

5.1 Contacting Hall Research and Shipping/Packaging

Contact the Hall Research Technical Support Department at 714-641-6607 or via email or web. Before you do, make a record of the history of the problem. We will be able to provide more efficient and accurate assistance if you have a complete description. If you need to ship your converter for repair, make sure to get a Return Material Authorization (RMA) number first.

6.0 Specifications

Standards	Analog Component Video YPbPr or RGB signals with sync-on-green.
Resolutions	All Standard TV and HDTV from 480i to 1080p
Video Level	1.0 volt p-p on Y and 0.7 v p-p on Pb and Pr
Bandwidth	20 Hz to 450 MHz
Common Mode Noise Rejection	100 dB @ 60 Hz, 70 dB @ 1 MHz, 50 db @ 10 MHz
Max Distance	Up to 1000 ft. (305 meters) - See table 4.1 for details
Temperature	Operating: 32 to 122 Deg F (0 to 50 Deg C); Storage: -40 to +185 Deg F (-40 to +85 Deg C)
Enclosure	Black Plastic ABS-94V0, UL File#56070
MTBF	100,000 hours (calculated estimate)
Power	Via the included power adapter. Voltage: 9v DC Center-Positive. Average Power Consumption: 850 milliwatts
Size (H x W x D)	1.1" H x 2.6" W x 2.6" D Each Device